

PROMOTION RECOMMENDATION  
THE UNIVERSITY OF MICHIGAN  
COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

Corey Stephenson, associate professor of chemistry, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of chemistry, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2005	University of Pittsburgh
B.S.	1998	University of Waterloo

Professional Record:

2013 – present	Associate Professor, Department of Chemistry, University of Michigan
2013	Associate Professor, Department of Chemistry, Boston University
2007 – 2013	Assistant Professor, Department of Chemistry, Boston University
2005 – 2007	Post-doctoral Fellow, ETH-Zurich

Summary of Evaluations:

Teaching – Professor Stephenson is viewed as a knowledgeable and demanding instructor. He had successfully taught multiple didactic courses in organic chemistry at Boston University where he developed and reorganized the curriculum. At Michigan, in winter term 2014, he taught the large second-term course in the two-semester undergraduate organic chemistry sequence. He is currently adapting his Boston University Upward Bound Program to offer a new course, “Green Chemistry and Photochemistry,” through the Michigan Math and Science Scholars Program. He is developing lab experiments using modern chemical methods, such as flow chemistry, for incorporation into the undergraduate curriculum. He also has an active outreach program to motivate high school students toward a science-oriented higher education. Professor Stephenson has been a successful research mentor who inspired and mentored 21 undergraduate, five high school, and sixteen graduate students, as well as nine post-doctoral fellows in his labs at Boston University and at Michigan. These researchers gained admission into graduate school and they have obtained fellowships and jobs. He has also been active in developing international exchange and research partnerships, hosting thirteen visiting scholars.

Research – Professor Stephenson is a world leader in synthetic organic chemistry, a core area of chemistry. The goals of this field are to develop new methods for synthesizing small molecules and natural products and to clarify the molecular mechanisms of these reactions. Professor Stephenson is noted for his pioneering work in the development of photocatalytic organic transformations. Since moving to the University of Michigan, he has incorporated photocatalytic methods into the synthesis of complex natural products and the degradation of lignin, the world’s most abundant biopolymer, as a step towards making lignin a useful chemical feedstock. His research program is viewed as both practical and scholarly. Evidence of Professor Stephenson’s national and international recognition as an expert and leader in the development of photocatalytic methods and the preparation of novel materials can be found in his 65 publications with 44 published or submitted manuscripts from his independent work. He has an outstanding citation record. Furthermore, he has received numerous prestigious awards, has presented over

120 invited lectures, and has an excellent funding record through the National Science Foundation, the National Institutes of Health, and Eli Lilly.

Recent and Significant Publications:

“A scalable biomimetic synthesis of resveratrol dimers and systematic evaluation of their antioxidant activity,” with B. S. Matsuura, et al., *Angewandte Chemie International Edition*, in press 2015.

“Photoredox activation and anion binding catalysis in the dual catalytic enantioselective Synthesis of  $\beta$ -Amino esters,” with G. Bergonzini, et al., *Journal of Chemical Sciences*, 5, 2014, p. 112.

“A photochemical strategy for lignin degradation at room Temperature,” with J. D. Nguyen and B. S. Matsuura, *Journal of the American Chemical Society*, 136, 2014, p. 1218.

“Synthesis of (–)-pseudotabersonine, (–)-pseudovincadifformine, and (+)-coronaridine enabled by photoredox catalysis in flow,” with J. W. Beatty, *Journal of the American Chemical Society*, 136, 2014, p. 10270.

Service – Professor Stephenson is a dedicated and conscientious colleague. He has been actively involved with graduate admissions, facilities, and safety committees, where he has been recruiting students and developing plans for infrastructure and policies to protect the safety of our laboratory workers. Additionally, he has served on a committee charged with making a recommendation to the College for adopting an electronic laboratory notebook option. On the national level, he serves as associate editor of *Beilstein Journal of Organic Chemistry* and on the editorial board of *Organic and Biomolecular Chemistry*. He has served on a number of review panels at the National Science Foundation for regular proposals and graduate research fellowship proposals, and he has served as an ad hoc reviewer for several major organizations.

External Reviewers:

Reviewer (A)

“Corey Stephenson has already established himself as a leader in one of the pre-eminent areas of synthetic methodology...and shows no sign of falling behind in either quality or quantity of research. He is already functioning at the level of a full professor, even at an institution like yours. I strongly and without hesitation support this promotion.”

Reviewer (B)

“...Stephenson has developed an internationally recognized research program in the area of photoredox catalytic-based methodology and the total synthesis of natural products. ...in the latest time period he has continued to rapidly rise in stature, both in the United States and internationally. I think it would be most appropriate for him to be promoted to the rank of Professor without delay.”

Reviewer (C)

“In examining his independent record of accomplishments, it is clear he stands head and shoulders above his peers as a creative and accomplished scholar; this also holds true when extended well beyond his immediate age group. As such, I am convinced that he will continue to be a star in academia and merits consideration and appointment at the very top research institutions in chemistry at the rank of Full Professor with tenure.”

Reviewer (D)

“He has quickly established himself as one of the leaders in this rapidly growing field and is one of the most visible and creative representatives of a new generation of organic chemists who are applying novel synthetic methodology to problems at the interface of catalysis, and natural product chemistry. ...there is only one way to properly characterize Corey Stephenson: he is brilliant. His track-record is outstanding at all levels. ... That is why I strongly support his promotion to Full professorship without any reservation.”

Reviewer (E)

“Corey is a leader in radical methods not just because of his superb experimental contributions but because of his scholarship. ... His multi-pronged approach to synthetic methods is sure to keep him at the forefront of the field. He is both an innovator and a scholar. As such, he is clearly ready for elevation to Full Professor.”

Reviewer (F)

“Since moving to your department... [Stephenson] has continued to publish high profile papers describing the use of visible light to promote radical-type redox reactions. He is among the pioneers in this, now burgeoning, area of photochemical methods research... Corey has shown a penchant for undergraduate education and community outreach... His desire to modernize the undergraduate laboratory experience, to establish student exchange programs with foreign universities, and to connect high school students with modern research are laudable goals... He has my unequivocal support for promotion.”

Reviewer (G)

“Taking these together – research, teaching, outreach, and service – one can quite confidently conclude that Corey is and will continue to be an all-around leader in our field.”

Summary of Recommendation:

Professor Stephenson has established a highly visible, world-leading, and well-funded research program. He is ranked at the top of his peer group nationally and internationally, and is a leader in organic synthesis research nationally. He has been an outstanding teacher and research mentor for students at all levels. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Corey Stephenson be promoted to the rank of professor of chemistry, with tenure, College of Literature, Science, and the Arts.



---

Andrew D. Martin  
Dean, and Professor of Political Science,  
College of Literature, Science, and the Arts

May 2015